

Three Japanese Land a Nobel

In December 2008, three Japanese scientists became the envy of their peers around the world when they took their place on one of the most prestigious stages in the world. The occasion was of course nothing less than the Nobel Prize Award Ceremony held in Stockholm, Sweden.

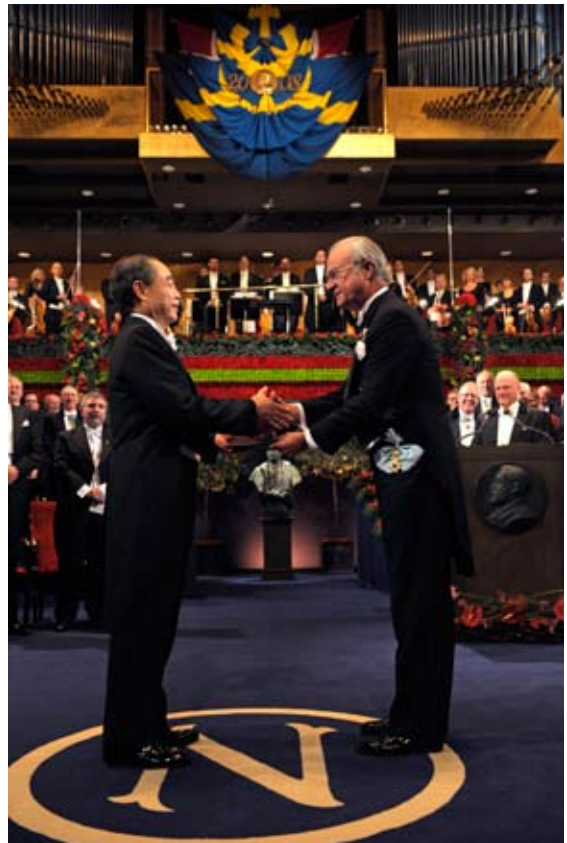
The Nobel Prize in physics was awarded jointly to Makoto Kobayashi, professor emeritus of the High Energy Accelerator Research Organization and Toshihide Masukawa, professor emeritus of Kyoto University. The Nobel Prize in chemistry went to Osamu

Shimomura, former senior scientist at the Marine Biological Laboratory in Woods Hole, Massachusetts. In addition, Japanese-born naturalized American Yoichiro Nambu, professor emeritus of the University of Chicago, was also awarded the Nobel Prize in physics. In total, 15 Nobel laureates have hailed from Japan, the eighth highest total for a country.

Kobayashi and Masukawa dedicated themselves to solving the mystery of why matter exists on earth. In the world of physics, the existence of particles and antiparticles with their opposite electric charges,



PHOTO: Osamu Shimomura, Toshihide Masukawa and Makoto Kobayashi (left to right) at a press conference held before the Nobel Prize Award Ceremony.



PHOTOS: Jiji

LEFT: Makoto Kobayashi receives his Nobel Prize medal.

is an accepted fact. However, in the real world, matter is made up of particles, something that can be explained using the phenomenon of CP violation. In 1973, these two scientists predicted that this phenomenon would occur if six types of fundamental matter particles, called quarks, were to exist. Their foresight was highly acclaimed when their theory was proved to be correct by experiments carried out some 30 years later.

Shimomura applied himself to finding an answer to the simple question: Why are Aequorea jellyfish luminous? He discovered that it is because of the existence of a green fluorescent protein (GFP). These days, this GFP is used to observe the metastasis of cancer or nerve cell abnormalities caused by Alzheimer's disease, and as such has developed into an essential technology in the fields of medicine and bioscience.

For all three Nobel laureates, while considerable time passed between their achievements and the awarding of their prizes, there is no doubt that they have greatly contributed to modern science.



ABOVE: Osamu Shimomura shows the audience some green fluorescent protein during his Nobel Lecture given at Stockholm University.